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July 19, 2013

Mr. Bobby Johnson  
Idaho Department of Lands  
Idaho Oil and Gas Conservation Commission  
300 N. 6th Street  
Suite 103  
Boise, ID 83702

RE: Exceptional Location Letter Application  
Section 34, Township 9 North, Range 4 West  
Willow Field, Payette County, Idaho

Mr. Johnson,

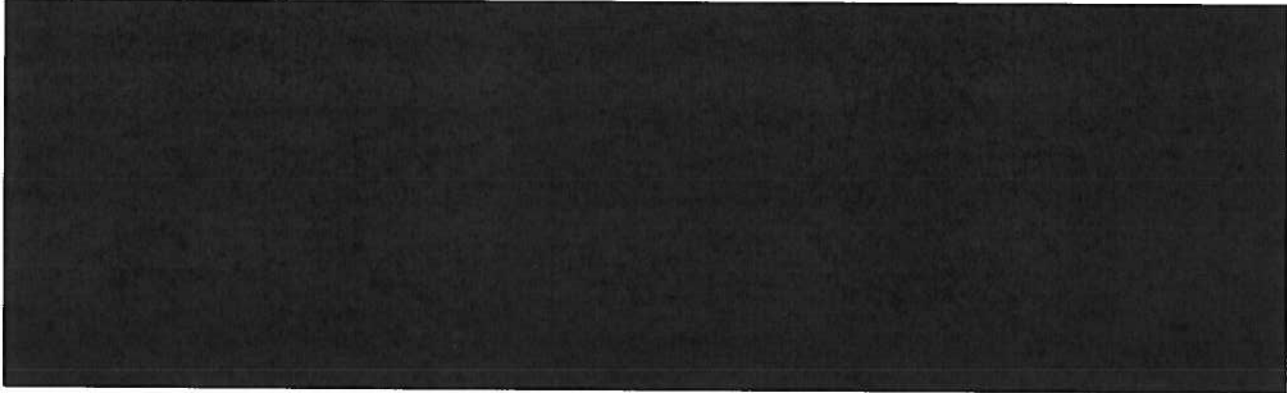
Please allow this letter to serve as Alta Mesa Services, LP's application for an exceptional location for its well proposed in Section 34, Township 9 North, Range 4 West in the Willow Field located in Payette County, Idaho. The well permit application is being transmitted concurrently for your consideration and Alta Mesa Services, LP ("Applicant") requests that this letter application be attached to the well permit as an additional submittal.

In accordance with IDAPA 20.07.02.330.04, the Applicant submits with this application a plat which provides the following information:

- a. The location at which an oil or gas well could be drilled in compliance with Subsections 330.01 or 330.02 or the applicable order;  
*(demonstrated as the nearest potential well location within Section 34)*
- b. The location at which the applicant requests permission to drill; and  
*(demonstrated by the Proposed Well Location)*
- c. The location at which oil or gas wells have been drilled or could be drilled, in agreement with Subsection 330.01 or 330.02 or the applicable order, directly or diagonally offsetting the proposed exception. *(There are no current wells within the adjoining sections. The Applicant has proposed a well in Section 3, T8N, R4W at a legal location within Section 3. The drainage for the proposed wells in Section 34 and Section 3 are not overlapping. The drainage zone is indicated on the attached plat and potential locations are demonstrated by the 1,660 foot legal location boxes shown within each section.)*

It should be noted that AM Idaho, LLC is the only working interest owner in the offset sections and thus would be operator in each of those sections.

The Applicant, Alta Mesa Services, LP, requests the approval of an exceptional location due to reservoir characteristics related to the target formation. The proposed surface hole and bottom hole locations are the most protective of the environment; are the most prospective for oil and/or gas; and are necessary to prevent waste and avoid stranding of resources.



Geologically, the selected target is believed to be the best potential location within the reservoir with the greatest chance that the target will be prospective for oil and/or gas. Selection of this location will reduce the number of wells necessary to fully develop the prospect by selecting the target with the greatest drainage potential which will prevent economic waste; prevent drilling of additional otherwise unnecessary wells which causes additional surface impacts; and avoid creating areas within the reservoir that are incapable of being drained.

For the reasons stated above, Alta Mesa Services, LP respectfully requests the approval of this exceptional location. If you have further questions, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'John F. Peiserich', written over the word 'Sincerely,'.

John F. Peiserich



# IDAHO OIL AND GAS CONSERVATION COMMISSION

## Application For Permit to Drill, Deepen or Plug Back

APPLICATION TO: Drill (\$2,000) ☒ Deepen (\$500) ☐ Plug Back (\$500) ☐

NAME OF COMPANY OR OPERATOR: Alta Mesa Services, LP Date: May 15, 2014

Address: 15021 Katy Frwy., Suite 400

City: Houston State: TX Zip Code: 77094 Telephone: 713-530-0991

Contact Name: Ronda Louderman Email Address: rlouderman@altamesa.net

### DESCRIPTION OF WELL AND LEASE

Name of Lease: Kauffman Well Number: 1-34 Elevation (ground) 2,484.3'

Well Location: Section: 34 Township: 9 North Range: 4 West (or block and survey)

(give footage from Section lines): 277' from West line; 1042' from North line

Field and Reservoir (if wildcat, so state): Willow County: Payette

Distance, in miles, and direction from nearest town or post office: 4.5 miles east of Payette

Nearest distance from proposed location to property or lease line: 365' from south Lease line

\*Net Distance from proposed location to nearest drilling, completed or applied for on the same lease: N/A

feet Proposed depth: 5,800' Rotary or cable tools: Rotary

Planned logging tools: Mud Logging only while drilling. After: Gamma Ray; Propagation Resistivity; Density, Neutron Porosity, Electron Capture Spectroscopy; Sonic; and Percussion sidewall cores will be completed by wireline.

Approx date work will start: June 15, 2014 Number of acres in lease(s): 640

Number of wells on lease, including this well, completed in or drilling to this reservoir: 1

If lease purchased with one or more wells drilled, complete the following information:

Purchased from (name) N/A

Address of above

Status of bond

Remarks: (If this is an application to deepen or plug back, briefly describe work to be done, giving present producing zone and expected new producing zone) N/A

CERTIFICATE: I, the undersigned, state that I am the Regulatory Coordinator  
of Alta Mesa Services, LP

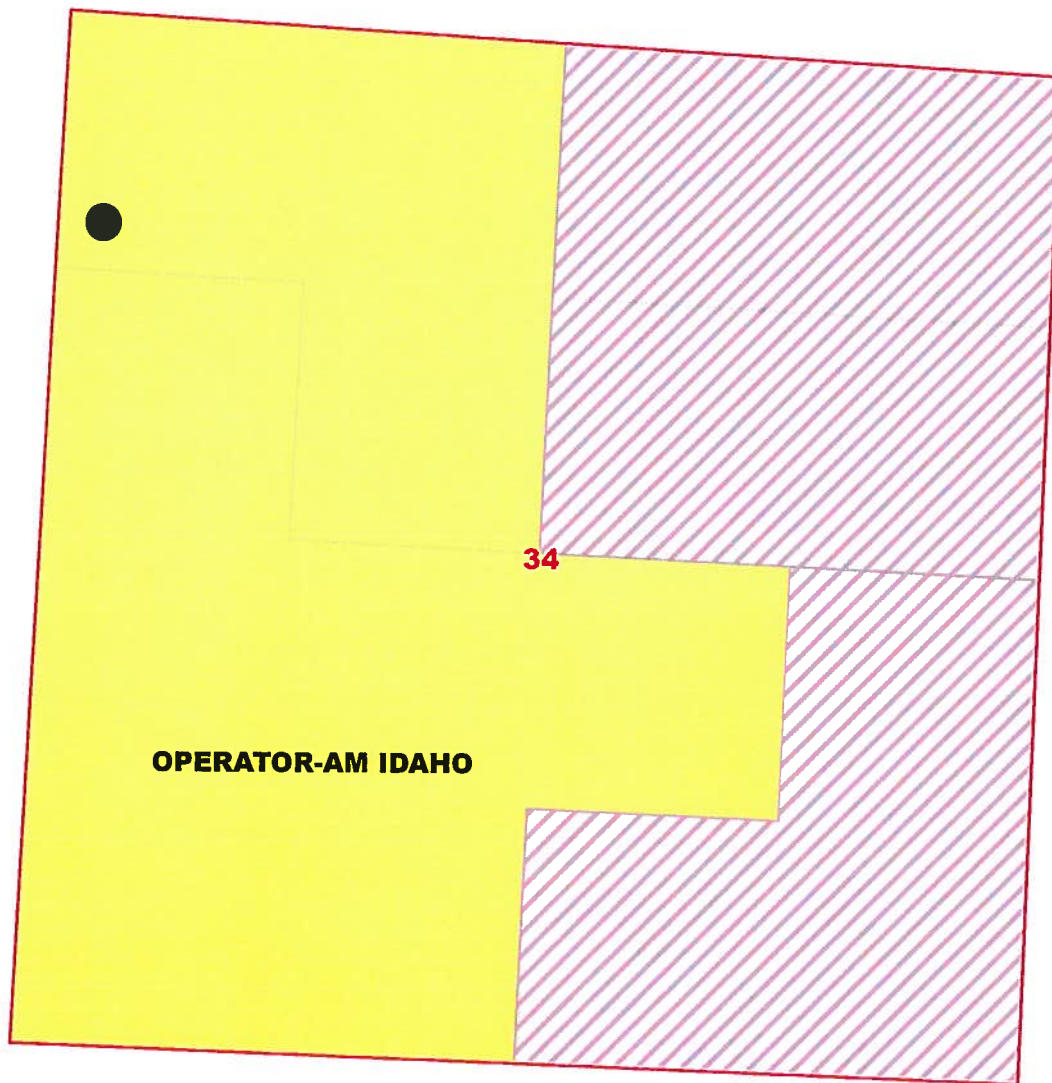
(company) and that I am authorized by said company to make this application and that this application was prepared under my supervision and direction and that the facts stated herein are true, correct and complete to the best of my knowledge.

Date: 5/15/2014 Signature: Ronda Louderman

Permit Number:  Approval Date:  Approved by:

API Number: 11-075-20624

**NOTICE:** Before sending in this form, be sure that you have given all information requested. See instructions on back.



## Kauffman 1-34 Section Plat

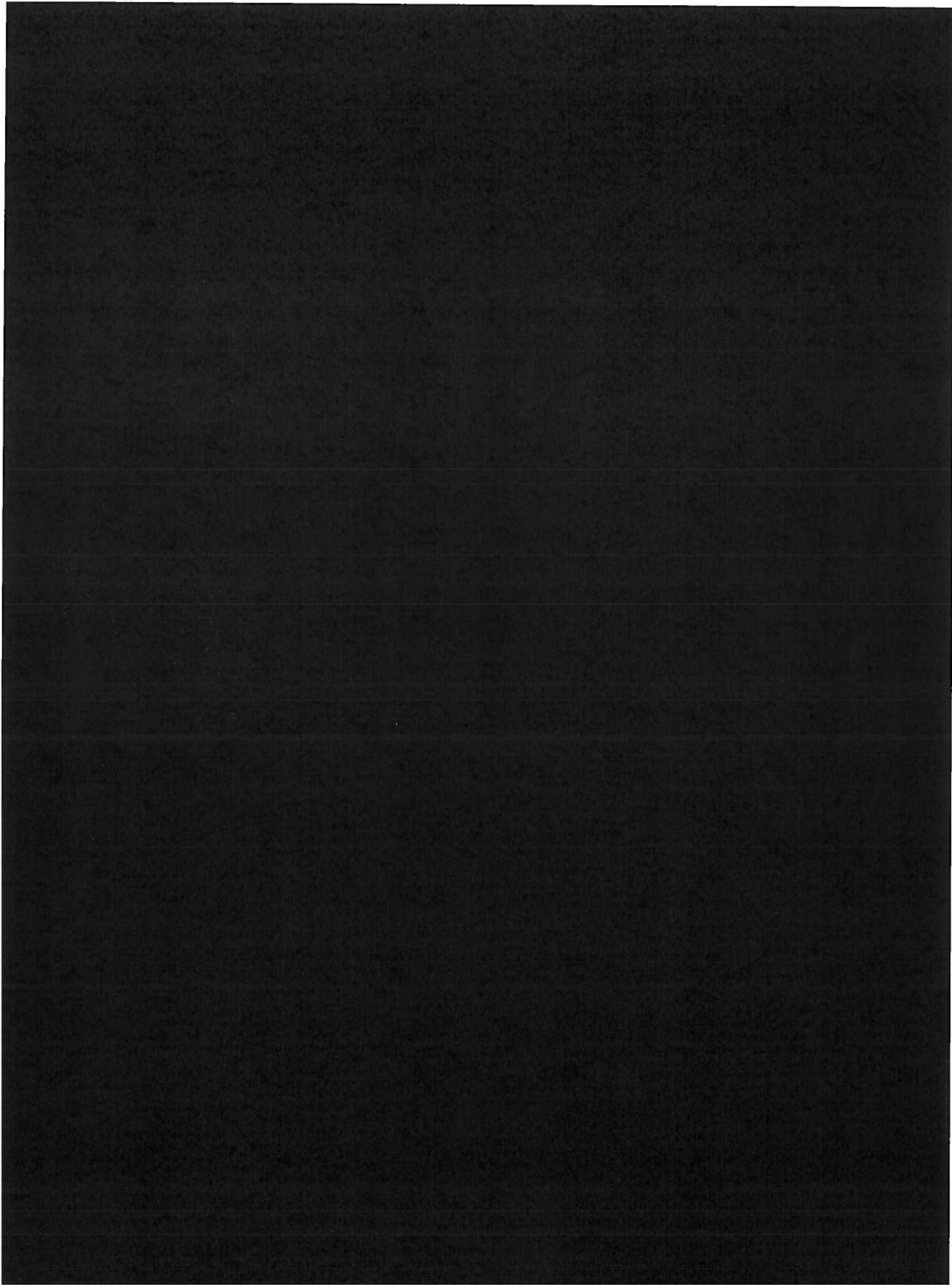
Located in Section 34, T9N R4W, BM, Payette County, ID  
06/10/14

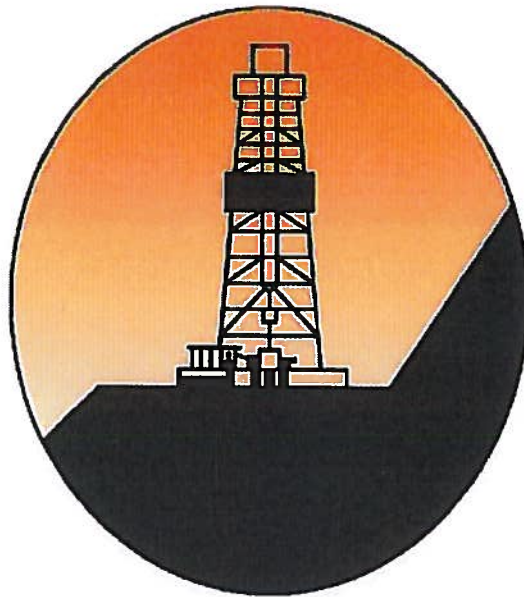
### Legend

- Section Lines
- Property Boundary
- AM Idaho
- BLM owns mineral rights only
- Proposed Bottom Hole Well Location



1 inch equals 1,000 feet





**ALTA MESA**

**ALTA MESA SERVICES, LP**

**IDL Permit Supplement**

**Kauffman 1-34**

**Payette County, ID**

**May 12, 2014**

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## 1 Background Information

**Objective:** The objective of this operation is to drill a vertical well to 5,800'TVD/MD.

<b>AFE #:</b>	TBD	<b>County:</b>	Payette
<b>Well Type:</b>	Vertical	<b>State:</b>	Idaho
<b>Well Name:</b>	Kauffman 1-34	<b>Section:</b>	34
<b>Field:</b>	Willow	<b>Township:</b>	9N
		<b>Range:</b>	4W

### Mapping Reference:

<b>System:</b>	NAD83 / NAD27	<b>Mag Dec:</b>	14.15° (01-Jul-2013)
<b>Zone:</b>	UTM11	<b>Grid Conv.:</b>	-0.75113 °
<b>SPCS:</b>	Idaho West Zone 1103	<b>Total Corr.:</b>	14.90113°

### Coordinates:

#### Surface Location:

##### NAD83

**Lat.:** N 44° 04' 45.35989"  
**Long.:** W 116° 48' 39.01178"  
**SPCS:** 2345904.7 ft. E  
881053.8 ft. N

##### NAD27

**SPCS:** 221490 ft. E  
881081 ft. N

#### Bottom Hole Location:

##### NAD83

**Lat.:** Same  
**Long.:** Same  
**SPCS:** Same  
Same

##### NAD27

**SPCS:** Same  
Same

### Elevation:

**GL:** 2,484.3 ft.  
**RKB:** 2496 ft.

### Planned TD:

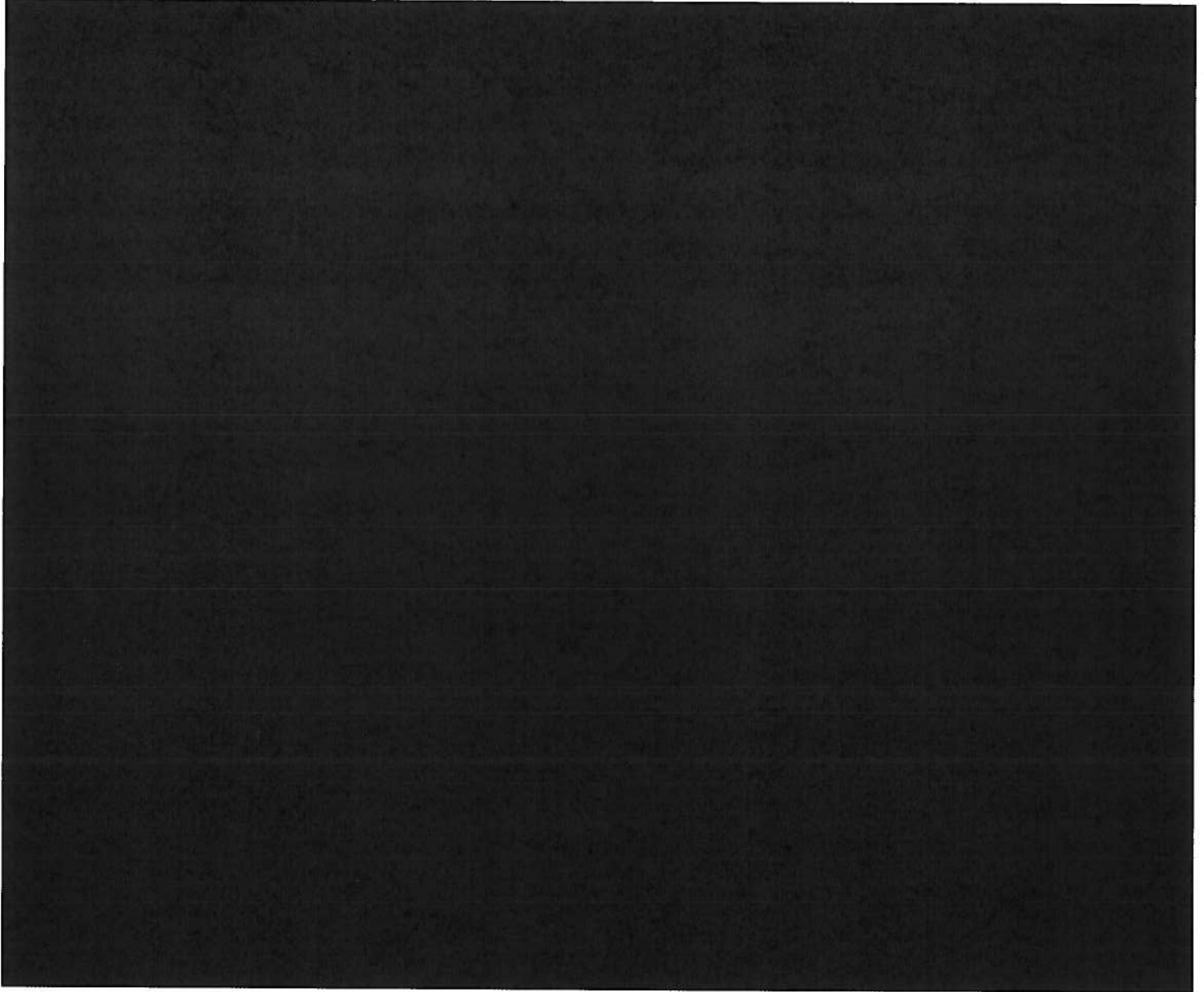
**MD:** 5,800.0 ft.  
**TVD:** 5,800.0 ft.

**Contractor:** Paul Graham Drilling

**Rig:** #7



## **2 Geologic Prognosis**



### **3 Site Preparation**

#### **3.1 Access Roads**

The proposed surface location is to be accessed by an existing farm road that supports heavy truck traffic, approximately 15,000' of improved road over an existing farm path, and 2,400' of new roadway.

#### **3.2 Erosion Control**

Appropriate grading, mechanical stabilization (rip-rap or hay bales), chemical stabilization (soil cement), and silt fencing will be used to prevent soil erosion. All cut and fill slopes are designed with a minimum 2:1 grade to minimize runoff erosion and ensure mechanical stability. See attached engineering drawings.

#### **3.3 Cellars**

An 8' deep round cellar box will be installed after the conductor is installed per the relevant section below.

#### **3.4 Pit System**

A closed-loop circulating system will be used for this well from spud. Zero discharge practices will be implemented, and all cuttings and waste fluid will be solidified and disposed of at an approved facility. A third party oilfield waste management contractor will provide waste management and tracking services.

#### **3.5 Sump**

The location will have a 2' deep trench on downhill sides where the spoil from that trench will be used to construct an earthen berm around the location. The trench will act as a sump to collect rain and wash water for controlled release or appropriate disposal as required.

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## 4 Well Construction

### 4.1 Casing and Cementing Program

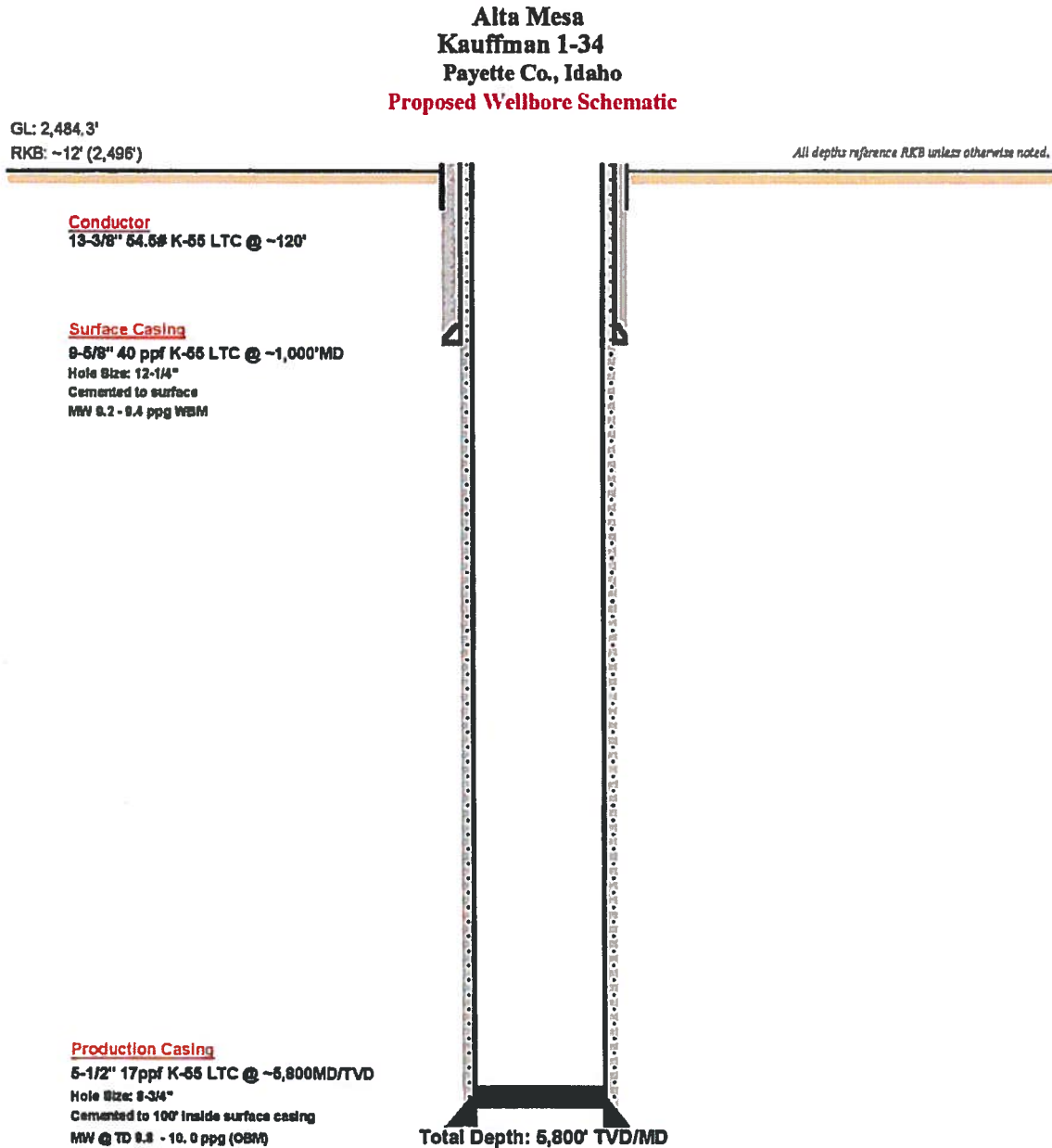
Well Interval	Bit Size	Casing Size, Grade and Weight	Casing Setting Depth	Top of Cement	Cement Type and Volume
Conductor	17-1/2"	13-3/8" 54.5 ppf K-55 LTC	120'	Surface	Class "A" ~140 sxs 100% excess
Surface	12-1/4"	9-5/8" 40 ppf K-55 LTC	1,000'	Surface	Lead: 100 sxs TCI Beaded Lite @ 10.4 ppg, 100% excess Tail: 50 sxs Class "H" @ 14.8 ppg
Production	8-3/4"	5-1/2" 17 ppf K-55 LTC	5,800'	Surface	Lead: 500 sxs TCI Lite @ 12.7 ppg Tail: 200 sxs Gas Seal @ 16.0 ppg

**TCI Beaded Lite:** An engineered light weight slurry with excellent compressive strength development the slurry exhibits low fluid loss, thixotropic behavior, and has zero free water.

**TCI-Lite:** A light weight gel extended slurry that develops excellent compressive strength within 24 hours.

**Gas-Bloc:** A premium production casing slurry that has a gas migration control additive for providing an exceptional cement bond to formation and casing. The slurry also contains clay control with low fluid loss for added gas migration inhibition and slurry stability.

## 4.2 Proposed Wellbore Schematic



Well Name & No.: Kauffmann 1-34	Field: Wildcat
County or Parish: Payette	State: Idaho
Total Depth (MD): 5,800'	(TVD): 5,800'

## 4.3 Blow-Out Preventers

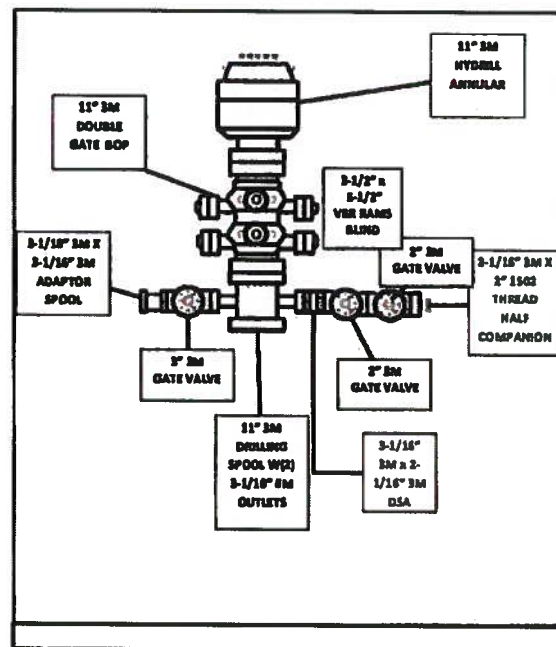
### 4.3.1 BOP Hardware Configuration

BOP Stack configuration includes an annular preventer and double ram preventers. The top most ram preventer will be fitted with variable ram blocks, the lower ram preventer will be fitted with blind ram blocks. A full-opening safety valve, inside BOP, and functioning wrench – *specific to the pipe in use and only those specific to the pipe in use* – are to be kept on the rig floor with easy access at all times.

### 4.3.2 BOP Testing

Test annular, rams, choke manifold, FOSV, and IBOP when BOP is first nipped up on casing head. Low-pressure test to 250psi and high-pressure test to 3,000psi (100% of 3M wellhead), except for annular. Test annular preventer to 2,100psi (70% of 3,000psi rating). Test the kelly hose and standpipe back to pump isolation valves to 200 psi above pop off setting or minimum of 3,000 psi. All tests must hold for five minutes. Retest specific component each time a seal is broken. Work BOP's and flush choke lines each trip. Tighten BOP and wellhead bolts every 3 days. Non-ported float valves to be used in BHA after surface casing set.

During drilling and completion operations, the ram-type blow-out preventer shall be function tested by closing on the drill pipe once every seven (7) days. Independently powered accumulators or accumulators and pumps shall maintain a pressure capacity reserve at all times to provide for repeated operation of hydraulic preventers. All tests may be conducted using a test plug. Tests shall be recorded by charts, if required by the Supervisor.



#### 4.4 13-3/8" Conductor

##### 4.4.1 Drilling

The conductor will be installed via auger and grout unless surface conditions dictate driving.

##### 4.4.2 Casing

Set Depth ft.	Top (RTE)	Size	Weight	Grade	Burst	Collapse	Centralizers
120'	GL	13-3/8"	54.5#	K-55	2730 psi	1130 psi	None

#### 4.5 12-1/4" Surface Hole

##### 4.5.1 Drilling

##### 4.5.1.1 Directional Objective

The surface hole will be drilled vertically to 1,000' MD/TVD.

##### 4.5.1.2 Mud System

The surface hole will be drilled using fresh water based mud. Additives will be included for inhibition and also to build high-viscosity sweeps as necessary.

Measured Depth, ft.	Mud Density, ppg	Funnel Viscosity, cP	Yield Point, lb/100ft <sup>2</sup>	API Fluid Loss, ml	pH	LGS %
120 – 1,000'	8.6	25-36	8-12	N/C	7.0-8.0	4 - 7

##### 4.5.2 Open Hole Evaluation

No open-hole evaluation will be conducted in this interval

##### 4.5.3 Casing

The surface casing is to be set at a depth that isolates problematic formations and usable water strata.

Set Depth, ft.	Top (RTE)	Size	Weight	Grade	Conn	Internal Diameter	Burst	Collapse	Tension
1,000'	GL	9-5/8"	40.0#	K-55	LTC	8.835"	3950 psi	2570 psi	561 kips



#### **4.6 8-3/4" Production Hole**

The 8-3/4" hole will be drilled vertically to ~5,800'.

##### **4.6.1 Drilling**

###### **4.6.1.1 Directional Objective**

The 8-3/4" production hole will be drilled vertically to 5,800' MD/TVD. Surveys will be obtained using a single-shot inclination tool.

###### **4.6.1.2 Mud System**

The production hole interval will be drilled with an invert emulsion mud system.

Measured Depth, ft.	Mud Density, ppg	Funnel Viscosity, cP	Yield Point, lb/100ft <sup>2</sup>	HTHP Fluid Loss, ml	ES	LGS %
1,000 – 5,800'	9.2 -9.8	36 - 45	6 - 10	<10.0	>600	<5%

An invert emulsion drilling fluid will be used from below surface casing to total depth. The production casing will be cemented to surface thus, no drilling fluid will be left in the hole. Drill cuttings waste generated will be managed on location by a third party oilfield waste management company who will supervise the solidification, tracking and transportation to an approved waste disposal site of all oilfield waste generated while drilling. A zero-discharge closed loop system will be employed.

##### **4.6.2 Logging Program**

While Drilling: Mud logging only

Coring: None

Wireline: After reaching TD, and conditioning the hole, wireline evaluation will be conducted as follows:

- Gamma Ray
- Propagation Resistivity
- Density
- Neutron Porosity
- Electron Capture Spectroscopy
- Sonic
- Percussion sidewall cores

#### 4.6.3 Production Casing

The production casing string is designed to be run to total depth and withstand the expected wellbore pressures.

Set Depth ft.	Top (RTE)	Size	Weight	Grade	Conn	Internal Diameter	Burst	Collapse	Tension
5,800'	GL	5-½"	17.0#	K-55	LTC	4.892"	5320 psi	4910 psi	272 kips

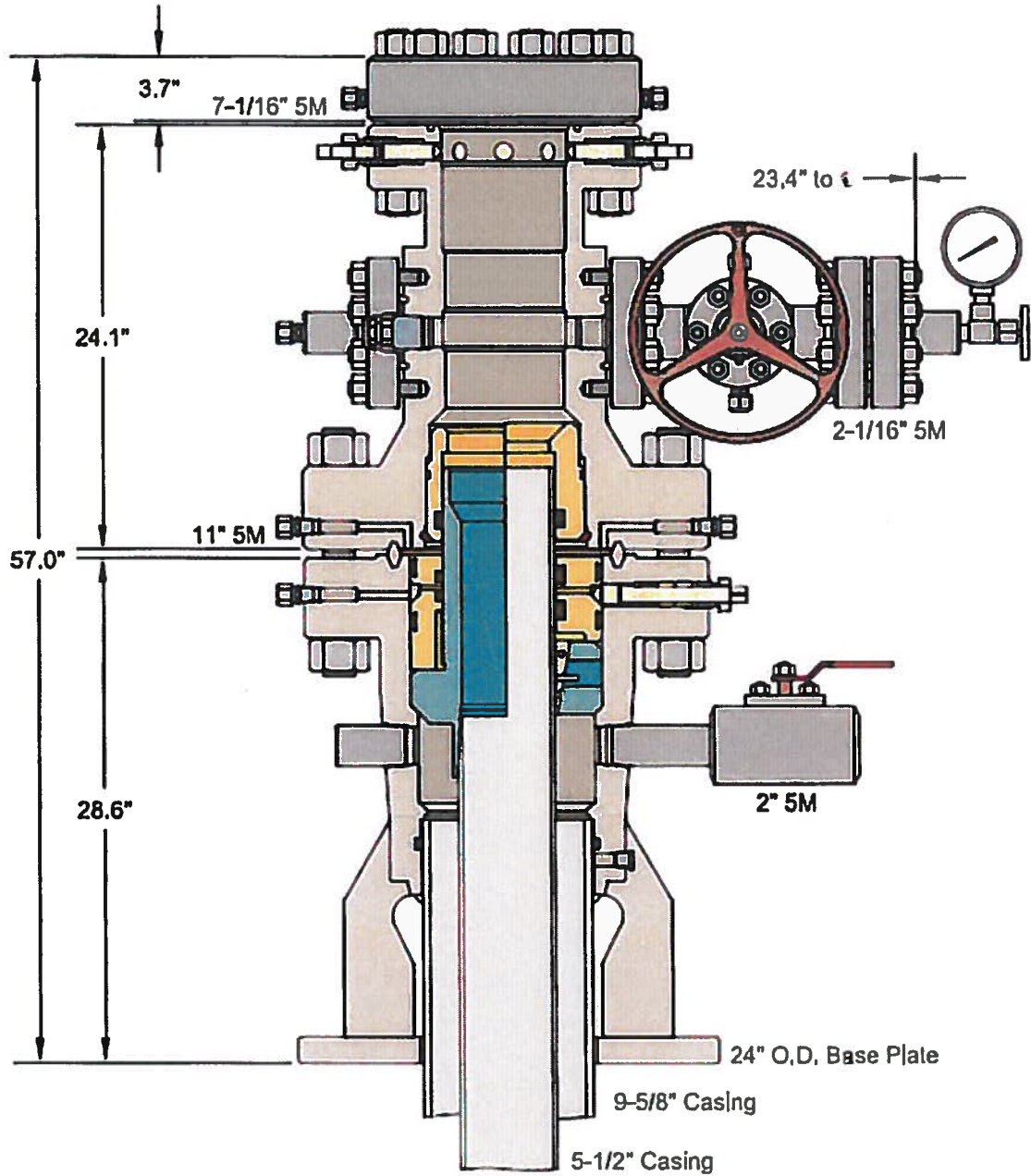
### 5 Completion

Method of completion will be determined subsequent to review of open-hole log data and cased hole cement bond logs (CBL).



## 6 Wellhead

### 6.1 Surface Wellhead System





## **7 Reclamation**

Reclamation will be conducted in accordance with IDAPA 20.07.02.325. To achieve those requirements, Alta Mesa Services, L.P. proposes to address reclamation through a multistep process which is outlined below. As provided for in IDAPA 20.07.02.325.08, Alta Mesa Services, L.P. may enter into a Surface Use Agreement with the landowner the terms of which will ensure that the site is left in a stable, non-eroding condition as required.

1. Re-establish slope stability, surface stability, and desired topographic diversity.
  - a. Reconstruct the landscape to the approximate original contour unless otherwise provided for in the Surface Use Agreement
  - b. Maximize geomorphic stability and topographic diversity of the reclaimed topography.
  - c. Eliminate high walls, cut slopes, and/or topographic depressions on site, unless otherwise approved.
  - d. Minimize sheet and rill erosion on the reclaimed area. Eliminate mass wasting, head cutting, large rills or gullies, down cutting in drainages, or overall slope instability on the reclaimed area.
2. Maintain the integrity of the topsoil and subsoil (where appropriate and not otherwise dictated by the Surface Use Agreement)
  - a. Identify salvaged topsoil and subsoil.
  - b. Segregation of salvaged soils to protect those materials from erosion, degradation, and contamination.
  - c. Incorporate stored soil material into the disturbed landscape to the extent practicable.
  - d. Stockpiled soils to be stored beyond one growing season shall be stabilized with appropriate vegetation
  - e. Record location and approximate volumes of stockpiles.
3. Prepare site for revegetation upon completion of well activities – plugging/abandonment.
  - a. Redistribute soil materials in a manner similar to the original vertical profile.
  - b. Reduce compaction to an appropriate depth (generally below the root zone) prior to redistribution of topsoil, to accommodate appropriate site-specific plant species.
  - c. Provide suitable conditions to support the long term establishment and viability of the desired plant community.
  - d. Protect seed and seedling establishment (e.g. erosion control matting, mulching, hydro-seeding, surface roughening, fencing, etc. to be determined based upon site specific conditions
4. Establish a desired self-perpetuating native plant community based upon region specific guidance available from NRCS
  - a. Establish species composition, diversity, structure, and total ground cover appropriate for the desired plant community
  - b. Select genetically appropriate and locally adapted native plant materials based on the site characteristics and setting.
    - i. Seed mixtures shall be selected based on soil type, site conditions and intended final use
    - ii. Seed shall not be used later than one year after the test date that appears on the label.
    - iii. The bags of seed shall be clearly labeled indicating test date, weed percentage or % Pure Live Seed (PLS), viability or germination percentage, and inert material

- 
- c. Select non-native plants only as a short term and non-persistent alternative to native plant materials. Ensure the non-natives are designed to aid in the re-establishment of native plant communities. Revegetate in accordance with best practices described below:
    - i. Re-spread topsoil to a minimum depth of 4 inches.
    - ii. Prepare a friable but firm and weed free seedbed that is not compacted by prior construction work.
    - iii. Appropriate firmness can be estimated when a person leaves about a ¼ inch deep footprint.
    - iv. Remove rocks, twigs, concrete, foreign material and clods over 2 inches that can't be broken down.
    - v. Soil moisture content shall be at least 30% soil capacity (estimated). Do not seed into undesirable moisture conditions (e.g. "dust" or "mud").
  - d. Plant communities shall be evaluated annually for two years to ensure revegetation success as determined by IDAPA 20.07.02.325
    - i. Repair and reseed areas that have erosion damage as necessary.
    - ii. If a stand has less than 70% ground cover after two years, re-evaluate the choice of plant materials, methods and available light and moisture. Re-establish the stand with modifications based on the evaluation
5. Reestablish initial visual composition
- a. Ensure the reclaimed landscape features conform to the prior conditions of the site.